

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

**Applicants** 

Akihiko YAGASAKI

Appln. No.

09/597,236

Filed

: June 20, 2000

For

ISOLATION TRANSFORMERS

Examiner

T. Nguyen

Art Unit

2832

Atty. Dkt.

37174-164287

## <u>AMENDMENT</u>

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

In response to the Office Action of August 28, 2002, please amend this application as follows:

## IN THE DISCLOSURE:

Please replace third paragraph beginning on page 1, continuing on page 2 with the following rewritten paragraph:

For suppression of noise-related troubles isolation transformers of electromagnetic-shield type have been used. The isolation transformers of electromagnetic-shield type have primary- and secondary coils isolated by approximately  $20 \ \mu m$ -thick aluminum foils. The isolation transformers of electromagnetic-shield type

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have such attenuation characteristics of normal-mode noise as depicted in Figure 11. Namely, in the frequency range of several hundred Hz to 1 *MHz* the attenuation increases generally mildly with the frequency to -50*dB*. In the range from 1*MHz* to 100*MHz* it takes the form of an irregular saw-tooth wave, which is comprised by troughs and crests of various sizes between the maximum of -78*dB* and the minimum of -24*dB*.

Please replace first paragraph beginning on page 16, with the following rewritten paragraph:



Moreover, in the existing isolation transformers shown in Figure 9, in which a single short-circuit ring 4 is used, the distance from the short-circuit ring of conducting thin film to each coil layer is different, and therefore the effect due to conducting thin film of eliminating or excluding the troubles caused by high-frequency noise components does not reach all parts of a coil on the average. In contrast, in the isolation transformer of the first embodiment, in which a short-circuit ring 4 of conducting thin film is positioned tightly adjacent to every coil layer, it is possible for the effect of eliminating or excluding the troubles caused by high-frequency noise components due to conducting thin film to reach all parts of a coil on the average.